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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/779,688

02/18/2004

Joji Oki

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EXAMINER

DO, ANH HONG

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

11/14/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/779,688	Applicant(s) OKI, JOJI	
	Examiner ANH H. DO	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/6/2004</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Objections***

2. Claim 4 is objected to because of the following informalities: "color-color components" (line 2) should be written as "three-color components". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 8 and 15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 8 and 15 define a computer based structural organization embodying functional descriptive material. However, the claims do not define a computer readable medium or memory and is thus non-statutory for that reason (i.e., "when functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed a computer based structural organization can range from

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paper on which the program is written, to a program simply contemplated and memorized by a person. The Examiner suggests amending the claims to embody the program on "computer-readable medium" or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-5 and 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Ben-David et al. (U.S. Patent No. 7,113,152).

Regarding claim 1, Ben-David discloses:

- a converter, arranged to color-convert the three-color components into four-color components at the same time (Fig. 3A: converter 46 for converting RGB components into four-color components);

- a controller, arranged to allow said converter to perform continuous color conversion to generate image data of five or more color components (Fig. 3A: controller 42 for allowing the converter 46 to perform continuous color conversion

to generate 6 color components as shown in Fig. 5B), and hold its color conversion result in memory (Fig. 3B: frame buffer 78).

Regarding claim 7, since this method claim recites the same subject matters as in apparatus claim 1, the discussion of claim 1 is applied hereto.

Similarly, claims 8 and 9 each is rejected by applying the discussion of claim 1.

Regarding claim 2, Ben-David teaches the controller 42 allows the converter 46 to execute the color conversion into four color components and then to execute color conversion of remaining one or more colors (Fig. 3A: executing color conversion of a RGB image components into four color components and then executing color conversion of remaining 2 colors top generate six color-components as shown in Fig. 5B).

Regarding claim 3, Ben-David teaches several look-up tables (col. 11, lines 32-35) and controller 42 realizes the color conversion of six colors by inherently changing setting of the look-up tables (Fig. 3A and col. 11, lines 32-38: performing de-gamma process for each color channel to change the output values in the LUT).

Regarding claims 4 and 5, Ben-David teaches the three-color components are red, green and blue (col. 11, line 1), and the four color components are CYMK or YCC (col. 22, lines 34-37), and light cyan and light magenta are inherently included in six color components as shown in Fig. 5B.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 6 and 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ben-David et al. (U.S. Patent No. 7,113,152) in view of Takahashi et al. (U.S. Patent No. 6,024,431).

Regarding claim 6, although disclosing as discussed in claim 1 above, Ben-David does not disclose expressly color conversion synchronizing with image formation of a printer engine.

Takahashi discloses color conversion synchronizing with image formation of a printer engine (col. 1, lines 22-28: synchronizing color conversion with print agents of a printer engine).

Ben-David & Takahashi are combinable because they are from color conversion.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to synchronize the color conversion with printer engine as taught by Takahashi in Ben-David's system.

The suggestion/motivation for doing so would have been not to decrease resolution of the displayed or printed image as the number of primary colors is increased (Ben-David, col. 4, lines 1-4).

Therefore, it would have been obvious to combine Ben-David with Takahashi to obtain the invention as specified in claim 6.

Regarding claim 10, Ben-David discloses:

- a converter for converting an image signal of three-color components into an image signal of five or more color components (Fig. 3A; and col. 15, lines 12-17: converting three-color components into six color components).

Ben-David does not disclose expressly converting color components into color components corresponding to a part of developing agents of a printer, and then converting the three-color components into color components rather than the part of the developing agents.

Takahashi discloses converting color components into color components corresponding to a part of developing agents of a printer, and then converting the three-color components into color components rather than the part of the developing agents (col. 12, lines 17-21: converting to developing agents CMYK of a printer and then to cobalt blue, gold, or silver agents).

Ben-David & Takahashi are combinable because they are from color conversion.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to synchronize the color conversion with printer engine as taught by Takahashi in Ben-David's system.

The suggestion/motivation for doing so would have been not to decrease resolution of the displayed or printed image as the number of primary colors is increased (Ben-David, col. 4, lines 1-4).

Therefore, it would have been obvious to combine Ben-David with Takahashi to obtain the invention as specified in claim 10.

Regarding claim 11, Takahashi teaches the color components corresponding to the part of the developing agents are YMCK (col. 12, lines 17-21).

Regarding claims 12 and 13, Takahashi teaches two kinds of conversion tables and the contents of the conversion tables are changed when converting into color components rather than the part of the developing agents, and switching conversion methods corresponding to attribute information (col. 12, lines 55-63).

Regarding claim 14, since this is a method claim corresponding to apparatus claim 10, the discussion of claim 10 is applied hereto.

Similarly, the discussion of claim 10 is applied to the rejection of claims 15 and 16.

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANH H. DO whose telephone number is 571-272-7433. The examiner can normally be reached on 5/4-9.

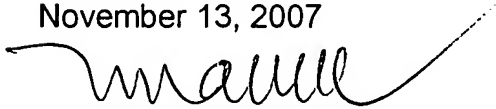
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, EILEEN LILLIS can be reached on 571-272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

November 13, 2007

A handwritten signature in black ink, appearing to read 'maull', with a long, sweeping horizontal line extending to the right.

**ANH HONG DO**  
**PRIMARY EXAMINER**